

REMARKS

Claims 1, 4-6, 12-25 are pending in the application. In this response, claim 1 has been amended, claims 2, 3, and 7-11 have been cancelled, and dependent claims 13-25 have been newly added. Exemplary support for the claim amendments and new dependent claims can be found throughout the specification and claims as originally filed. See, for example, pages 25-28, page 31, lines 8-20, page 32, lines 16-26, and page 33, lines 7-14 of the present specification.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of at least the foregoing amendments and the following remarks.

Rejections under 35 U.S.C. §§ 102/103

Claims 1-12¹ have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over EP 725 043 (hereinafter "Sandoz"). The rejection is respectfully traversed in view of the foregoing claim amendments.

With regard to the anticipation rejection, it should be noted that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

¹ While the Office Action dated January 15, 2008 indicates that claims 1-6 have been rejected, the Examiner has confirmed that due to an oversight claims 7-12 were not addressed in the Office Action dated January 15, 2008. However, it has been confirmed by the Examiner that claims 7-12 are also rejected under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over EP 725 043. Please refer to the Interview Summary dated March 28, 2008.

With regard to the obviousness rejection, it should be noted that the Office has the initial burden of establishing a **factual basis** to support the legal conclusion of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in KSR Int'l v. Teleflex Inc., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning with some rational underpinning** to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (emphasis added).

Sandoz discloses a shrinkage-reducing dispersing agent which includes a graft polymer which is a polycarboxylic acid or a salt thereof, having side chains derived from at least one species selected from (a) oligoalkyleneglycol and/or (b) polyalkylene glycols or derivatives thereof. (See claim 1 of Sandoz). Sandoz discloses examples of the graft polymers of the general formulas indicated by S, A, B, and M at pages 4-6.

In contrast to Sandoz, the presently pending claims recite a drying shrinkage-reducing agent for a hydraulic material having a polymer which contains specifically recited proportions of monomers/structural units (I) to (IV), wherein the drying shrinkage-reducing agent exhibits a specific surface tension.

In particular, with regard to the structural unit (I), Applicants respectfully submit that the presence of hydrophobic group R⁴ (i) lowers the interfacial tension

between a cured cement product and water, (ii) reduces the tensile stress of water which causes the drying shrinkage, and (iii) consequently represses the drying shrinkage. (See, for example, page 8, lines 17-22 of the present specification). With regard to structural unit (II), Applicants respectfully submit that structural unit (II) imparts water-solubility to the polymer. (See, for example, page 10, lines 12-14 of the present specification). With regard to structural unit (III), Applicants respectfully submit that structural unit (III) manifests dispersibility. (See, for example, page 9, lines 21-22 and page 10, lines 1-5 of the present specification).

Accordingly, Applicants respectfully submit that the presently recited shrinkage-reducing agent is water-soluble, exhibits a specific surface tension, and has good dispersibility. This is evidenced in terms that a surface tension is determined by using an aqueous solution of a drying shrinkage-reducing agent. (See, for example, page 12, lines 16-26 of the present specification).

Applicants respectfully submit that Sandoz fails to disclose or suggest the presently claimed combination that includes the recited structural units (I) and (III). Moreover, Applicants respectfully submit that Sandoz not only fails to disclose or suggest the combination of structural units presently recited, but Sandoz also fails to recognize the advantages of the presently recited structural units. Applicants respectfully submit that Sandoz not only fails to disclose or suggest the presently recited structural units (I) and (III) but Sandoz also fails to disclose or suggest the presence of hydrophobic group of R^4 in the structural unit (I).

Applicants respectfully submit that the drying shrinkage-reducing agent comprising a polymer which includes structural units (I)-(IV) in the presently recited specific amounts can be used in a hydraulic material for the purpose of effectively

reducing drying shrinkage. (See, for example, page 10, lines 14-22 and Table 1 at page 63). In particular, the Examiner's attention is directed to page 63 of the present specification wherein it is provided that the comparative polymers 2 and 3 that do not include structural unit (I) indicate a surface tension higher than 50 mN/m.

Accordingly, Applicants respectfully submit that Sandoz's polymer will not have the presently recited surface tension of 25 - 50 mN/m.

The Examiner's position is that in the event that one would not immediately envisage the claimed monomer then it remains obvious. (Official Action, Page 2). In this regard, Applicants respectfully submit that M.P.E.P. § 2142 provides that the key to supporting any rejection under 35 U.S.C. 103 is the *clear articulation of the reason(s)* why the claimed invention would have been obvious. KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) (emphasis added). Moreover, it should be noted that if the Examiner is relying on a scientific theory, evidentiary support for his rejection, the existence and meaning of that theory must be provided. In re Grose, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979).

In view of at least the foregoing, Applicants respectfully submit that the presently pending claims are not anticipated by or obvious over Sandoz.

Information Disclosure Statement

JP-A-2002-53358 has been cited in the Information Disclosure Statement being submitted herewith. Applicants respectfully submit that this JP reference does not disclose or suggest the presently recited features and fails to appreciate the advantages resulting from the presently recited drying shrinkage-reducing agent.

Accordingly, the presently pending claims are patentable over JP-A-2002-53358 for at least the reasons discussed above.

Conclusion

Applicants invite the Examiner to contact Applicants' representative at the telephone number listed below if any issues remain in this matter, or if a discussion regarding any portion of the application is desired by the Examiner.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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